Plants from southern Patagonia collected by Charles Wellington Furlong

W. W. Rowlee

Introduction

During the summer of 1907–1908 (November to March), Mr. Furlong collected a very interesting set of specimens representing the vegetation of southern Patagonia. The plants for the most part grew in the vicinity of the southern shore of Lake Argentine. Some, however, were secured in the journey overland from the mouth of the Gallegos river. Mr. Furlong was working primarily on problems of ethnology and the story of his journey is told in Harper's Magazine for June, 1910, and May, 1911.

The vegetation of the southern end of South America has been a subject for investigation for many years. One of Darwin's most valuable works is his account of his voyage to South America. He ascended the Santa Cruz River, the outlet of Lake Argentine, far enough to see the Andes, but not far enough to discover the Lake. Before Darwin's time, however, collections had been made especially along the Straits of Magellan; many have collected in the same region more recently. Few travellers, however, even up to the present time have explored the inland region of southern Patagonia.

If we except the so-called Antarctic Continent of the ice bound south polar region, it is the most southerly continental land. The plants inhabiting it have long been known to show affinity with the flora of Australia, New Zealand, and other Antarctic islands. This relation has led to the belief that there once existed a continent in the Southern Hemisphere which connected more or less completely these southern land masses. The results of antarctic explorations in recent years have tended to confirm this theory. Fossil remains of various gymnosperms and angiosperms have been discovered which represent the ancestral forms of closely related species now widely separated geographically.

Lake Argentine is located in southern Patagonia about latitude 51 degrees. Its latitude and longitude south correspond almost exactly to the latitude and longitude north of Lake Mistassinica in southern Labrador. The continents of North America and South America have generally speaking the same shape. Their configuration in relation to the tropics, however, is reversed. South America narrows southward until in the latitude of the region under discussion, it is about 200 miles wide; on the other hand North America widens towards the north until in the latitude of southern Labrador, it stretches out to more than three thousand miles. Arboreal vegetation extends as far south in South America as it does north in North America. In fact the climate of corresponding latitudes south seems to be less detrimental to plant-life than corresponding latitudes in North America. This is probably due to the influence of the oceans.

It has long been known that the only strip of deciduous forest in the southern continent is along the east side of the Andes in temperate South America. In the north temperate zone deciduous forests form a very dominating feature in the vegetation of both hemispheres. This type of vegetation is restricted in the Southern Hemisphere to a very limited area extending from subtropical Argentina and Chile southward and across the Fuegia Peninsula. In striking contrast to the northern deciduous forest the southern one is composed of a single generic type the so-called southern beeches (*Nothofagus antarctica* and its congeners). The west side of Patagonia and Fuegia has an evergreen rain-forest. One of the most abundant elements in that forest is the evergreen species of this same genus, *Nothofagus*. This reminds one in a way of the oaks of North America which are represented by both deciduous and evergreen species. The rain-forest area comprises the westerly slope and summit of the Cordilleras of the Andes. This is a region of perpetual rain and fog. The easterly part of Patagonia and Fuegia presents the other extreme of climate in that it is arid and wind-swept with a comparatively small rainfall. It is the pampas region and supports a distinctly desert vegetation. Lying between these two extremes is the narrow belt of deciduous forest extending over about fifteen degrees of longitude, that is, from southern Fuegia to the Rio

Negro. This corresponds in distance from Central Labrador to Washington, or from Sitka to San Francisco. It seldom exceeds fifty miles in width and is confined to the easterly base of the Andes. Like most other regions lying between two extremes, this transitional region supports a vegetation that is unique and diversified.

Dusén made a special study of the vegetation of Fuegia and reports that few species (not more than four) represent the vegetation of the forest floor in the transitional region in Fuegia. Other travelers speak of the absence or scarcity of vegetation in the beech groves of Patagonia. Whether this is due to the intense shade of the beeches or to historical reasons or to both can only be conjectured. There seems to have been no type of vegetation in this southern region corresponding to the rich spring flora of the forest floor in the north temperate zone.

Lake Argentina is the most southerly of several large lakes in the easterly foothills of the Patagonia Andes. It is a large lake some forty miles long and fifteen miles wide and with long arms at the westerly end, one extending north and the other south for thirty or forty miles. Both of these arms have large glaciers flowing into them. The outlet of the lake is Santa Cruz River which flows eastward into the Atlantic Ocean. The western end of the lake and particularly the north and south arms are filled with icebergs for the greater part of the year. The northern shore rises abruptly into an elevated table land which has been explored only to a very limited extent and that principally along the Leona river which comes down from Lake Veidma some twenty-five miles away and empties into Santa Cruz River near Lake Argentina. The southern shore of the lake is more hospitable and a few sheep ranchers inhabit the region. Between Lake Argentina and its southwesterly arm the region is known as the Burmeister peninsula. There are two mountains on this peninsula, the westerly one Mt. Buenos Aires and the easterly one Mt. Frias. It was from this peninsula and the slopes of these mountains that the principal part of Mr. Furlong's collections were made. South of the Burmeister Peninsula there is a range of mountains, the Baguales, of considerable elevation which extends easterly into the Patagonia high pampas region. These mountains are rough,

covered with volcanic rock and present a formidable barrier to travel to the south. The lake Argentine valley is therefore a vast amphitheater in the east side of the main Cordilleras and apparently affords more favorable conditions for vegetation than any place south or immediately north of it.

The collections from which the descriptions of Patagonia plants have been made are very widely separated. Collections in herbaria in the United States are meager and often imperfectly named. The national herbaria of Chile and of Argentina contain a large amount of the material. The other principal collections are in the Kew Herbarium at London and the National Herbarium at Stockholm, Sweden. This makes it difficult to identify species with absolute certainty. The only works dealing with the flora in a synoptical way are Hooker's Flora Antarctica, Macloskie's Flora of Patagonia, and Reiche's Flora of Chile. Many monographs and lists, however, have appeared.

One of the most recent is a list of plants based on a collection of plants made by Pritchard and published by Rendle in the Journal of Botany in 1904. This collection was also made principally on the Burmeister Peninsula. Rendle's list contains about 150 species of flowering plants, 18 of which are described as new species. Our list contains 166 species of flowering plants. We have refrained from describing as new any of our plants at the present time, but have instead associated each specimen with a name already published. Further study and particularly opportunity to compare our specimens with authentic specimens may warrant recognition of novelties in the collection.

LIST OF SPECIES COLLECTED

LICHENS

1. CLADONIA COCCIFERA (L.) Willd.
2. STICTA ENDOCHRYSEA Delise.
3. NEPHROMA ANTARCTICUM (Wulf.) Nyl.
   Very closely related to *N. arcticum* (L.) E. Fr.

MOSSES

(Determined by A. LeR. Andrews)

4. BARTRAMIA POMIFORMIS (L.) Hedw. var. CRISPA B. & S.

5. WEYMOUTHIA MOLLIS (Hedw.) Broth.
6. POLYTRICHADELPHUS MAGELLANICUS (L.) Mitt.

LYCOPODIACEAE

7. LYCOPODIUM MAGELLANICUM Sw. Syn. Fil. 13. 1806.

POLYPODIACEAE

8. ASPIDIUM MOHRIOIDES Bory, Mém. Soc. Linn. Paris **4**: 597. 1826.
9. CYSTOPTERIS FRAGILIS (L.) Bernh. Schrad. Neues Jour. Bot. **1**[2]: 27. *pl. 2, f. 9.* 1806.
10. ASPLENIUM MAGELLANICUM Kaulf. Enum. Fil. 175. 1824.

OPHIOGLOSSACEAE

11. BOTRYCHIUM LUNARIA (L.) Sw. Schrad. Jour. Bot. **1800**[2]: 110. 1801.

GRAMINEAE

12. DESCHAMPSIA FLEXUOSA (L.) Trin. Bull. Acad. Sc. St. Petersburg **1**: 66. 1836.
    Aira flexuosa L. Sp. Plant. 96. 1753.
13. CORTADERIA PILOSA (D'Urv.) Hack.; Dusén, Svenska Exped. till Magell. **3**: *222.* 1900.
    Arundo pilosa D'Urv. Mém. Soc. Linn. Paris **4**: 600. 1826.

The best known of this genus is Pampas Grass, *C. argentea* (Nees) Stapf. Our species is the only one in the Magellan region. The genus is confined to South America.

14. BROMUS COLORATUS Steud. Syn. Pl. Gram. 429. 1855.
15. POA FUEGIANUS (Hook. f.) Hack.; Dusén, Svenska Exped. till Magell. **3**: *225.* 1900. Macloskie, Rep. Princeton Univ. Exp. Pat. **8**: 235. *f. 42.* 1905.
    Festuca fuegianus Hook. f. Fl. Ant. **2**: 380. *pl. 141.* 1847.

This is the "forma *vivipara*" depicted in Hooker's illustration.

16. FESTUCA GRACILLIMA Hook. f. Fl. Ant. **2**: 383. 1847.

The specimens have no flowers and their determination is uncertain. Mr. Furlong says: "Grass from the pampas of Patagonia, vicinity of foot-hills of the Andes between the source of

the Gallegos and Santa Cruz Rivers. It is upon this grass that the great herds of Patagonian sheep feed."

17. FESTUCA PURPURASCENS Banks & Sol.; Hooker, Fl. Ant. **2**: 383. *pl. 140.* 1847.

18. POA PRITCHARDI Rendle, Jour. Bot. **42**: 324. 1904.

From Mt. Buenos Aires, the locality where the type was collected.

19. POA ARGENTINA Speg. Rev. Agron. i Vet. La Plata 1897: 584.

The type was collected at Lake Argentine. It belongs to the sect. *Dioicopoa* of Hackel (Engler & Prantl, Nat. Pflanzenfam. 2^2: 73. 1888). Only the staminate plant appears in this collection.

20. POLYPOGON INTERRUPTUS H. B. K. Nov. Gen. & Sp. 1: 109. *pl. 44.* 1815.

Awns longer and spike more compact than is represented in the original figures.

21. STIPA POGONATHERA Desv.; C. Gay, Fl. Chil. **6**: 277. 1853.

CYPERACEAE

22. CAREX BANKSII Boott, Trans. Linn. Soc. **20**: 119. 1846.

23. CAREX INCONSPICUA Steud. Syn. Pl. Cyp. 221. 1855.

Culms 25 cm. high.

JUNCACEAE

24. LUZULA CHILENSIS Nees & Meyen; Kunth, Enum. Pl. **3**: 312. 1841.

LILIACEAE

25. LUZURIAGA MARGINATA (Banks & Sol.) Benth. & Hook. Gen. Pl. **3**: 768. 1883.

Enargea marginata Banks & Sol.; Gaertner, De Fruct. **1**: 283. *pl. 59. f. 3.* 1788.

AMARYLLIDACEAE

26. ALSTROEMERIA NANA Rendle, Jour. Bot. **42**: 325. 1904.

IRIDACEAE

27. SISYRINCHIUM CHILENSE Hook. Curt. Bot. Mag. *pl. 2786.* 1827.

28. S. JUNCEUM E. Meyer; Presl, Rel. Haenk. **1**: 118. 1830.

29. S. STRIATUM Sm. Icon. Pict. *pl. 9.* 1789.

30. S. IRIDIFOLIUM H. B. K. Nov. Gen. & Sp. **1**: 324. 1815.

31. SOLENOMELUS SISYRINCHIUM (Griseb.) Pax; Engler & Prantl, Nat. Pflanzenfam. 2^5: 152. 1888.

Lechlera Sisyrinchium Griseb.; Lechler, Pl. Chil. Exsic. *2966.* 1853–1855.

Having every appearance of a *Sisyrinchium* except the elongated ovary.

32. SYMPHYOSTEMON BIFLORUS (Thunb.) Dusén, Svenska Exped. till Magell. **3**: 203. 1900.

Gladiolus biflorus Thunb. Diss. Glad. 10. 1784.

33. S. LYCKHOLMI Dusén, Svenska Exped. till Magell. **3**: 204. *pl. 10, f. 4–7.* 1900.

BURMANNIACEAE

34. ARACHNITES UNIFLORA Phil. Bot. Zeit. **28**: 217. 1864.

This is the only plant of this family growing outside tropical or subtropical regions except the species of *Thismia* discovered recently by Pfeiffer* near Chicago. Our plant, furthermore, is the only vascular saprophyte in south temperate South America. It was first found by Philippi in the Province of Valdivia, Chile, in 1864. In transmitting it to Professor Schlechtendahl, Dr. Phillippi made the following observation: "*Arachnites uniflora* Ph. A new orchid genus from Valdivia. A few weeks ago, in my property in S. Juan, my son discovered a wonderful (to me at least) orchid, a few hundred paces from the dwelling, and under the shade of a macqui-bush (*Aristotelia Macqui*). Unfortunately the large number of specimens which had been collected were destroyed in the fire which on November second laid my possessions in ashes in a half-hour. Only through a lucky accident a few escaped, and these have not been well enough preserved to allow me to make out distinctly the structure of the gynostemium,

* Bot. Gaz. **57**: 122. 1914.

which, at all events, is very anomalous." The next year he sent to the editor of Verh. d. zoologisch-botanischen Gesellschaft the following letter:

"S. JUAN IN THE PROVINCE OF VALDIVIA,
"February 5th, 1865.

"Dear Sir:

"About a year ago I received from Professor von Schlechtendal a report on a remarkable orchid (?) which my eldest son had discovered here in several places on the same unlucky day in which the whole of my possessions were burned. I called this plant *Arachnites uniflora*. I had not been able to recognize with certainty the pistil and stamens in the small, dried specimens which I possessed. However, there appeared to me to be present six stamens of the usual form. In the latter part of November, my son, in spite of the great amount of labor that the management and rebuilding of the estate involved, again found this plant and studied and portrayed it. I herewith share with you his drawings and descriptions so that you may convince yourself that this plant must unquestionably found a distinct family.

"*Arachnites* occurs not infrequently in the neighborhood of my house, always in the shade of *Aristotelia Macqui* and other trees, which usually will not suffer other vegetation beneath them. It appears to be a wound (?) parasite. In height it varies from between a foot and a foot and a half. All specimens, without exception, are one-flowered."

It has been found in several places along the Andes south from Valdivia to somewhat south of Lake Argentine. It grows in peaty humus in the shade of various trees.

ORCHIDACEAE

35. CHLORAEA KINGII (Hook. f.) Wildeman, Rés. Voy. Belgica, Bot. Phan. 72. 1905.

Asarca Kingii Hook. f. Fl. Ant. **2**: 351. 1847.

36. C. PLEISTODACTYLA Kraenzl. & Speg. Anal. Mus. Nac. Buenos Aires **7**: 167. 1902.

This species is closely related to, if not identical with, *Asarca arauacana* Phil. Linnaea **29**: 56. 1857–1858.

37. C. MAGELLANICA Hook. f. Fl. Ant. **2**: 350. 1847.

A beautiful and striking plant on account of dark veins of the bracts and the perianth.

38. CODONORCHIS LESSONII (D'Urv.) Lindl. Gen. & Sp. Orch. 411. 1830–1840.

Pogonia tetraphylla Poepp. & Endl. Nov. Gen. & Sp. Pl. **2**: 16. *pl. 122*. 1838.

FAGACEAE

39. NOTHOFAGUS ANTARCTICA (Forst.) Oerst. Vidensk. Selsk. Skr. V. **9**: 354. 1873.
Fagus antarctica Forst. Comm. Soc. Gotting. **9**: 24. 1789.
Young leaves just developing from the scaly buds.

URTICACEAE

40. URTICA MAGELLANICA Juss.; Poiret, Encycl. Meth. Suppl. **4**: 223. 1815.

PROTEACEAE

41. EMBOTHRIUM COCCINEUM Forst. Char. Gen. Plant. 16. *pl. 8.* 1776.

MYZODENDRACEAE

42. MYZODENDRON QUADRIFLORUM DC. Coll. Mém. **6**: *pl. 12, f. 2*, 1830; Skottsberg, Engler, Pflanzenreich 4^{58}: 12. 1914.
43. M. LINEARIFOLIUM DC. Prodr. **4**: 671. 1830; Skottsberg, *l. c.* 11.
44. M. PUNCTULATUM Banks; Solander in Forster, Comm. Soc. Gotting. **9**: 45. 1789 (*nomen nudum*); De Candolle, Prodr. **4**: 286. 1830; Skottsberg, *l. c.* 15.

SANTALACEAE

45. ARJONA PUSILLA Hook. f. Fl. Ant. **2**: 342. 1847.
46. A. TUBEROSA Cav. Icon. Pl. **4**: 57. *pl. 383.* 1797.
47. MYOSCHILOS OBLONGUM Ruiz & Pavon, Syst. Veg. 73. 1798; Fl. Peruv. & Chilen. **3**: 20. *pl. 242.* 1802.
48. QUINCHAMALIUM PROCUMBENS Ruiz & Pavon, Fl. Peruv. & Chilen. **2**: 1. *pl. 107b.* 1799.

CHENOPODIACEAE

49. CHENOPODIUM ALBUM L. Sp. Plant. 219. 1753.
50. C. ANTARCTICUM (Hook. f.) Benth. & Hook. f. Gen. Pl. **3**: 52. 1880.
Blitum antarcticum Hook. f. Fl. Ant. **2**: 549. 1847.

CARYOPHYLLACEAE

51. CERASTIUM ARVENSE L. Sp. Pl. 438. 1753.
52. MELANDRIUM MAGELLANICUM (Lam.) Fenzl; Rohrbach, Linnaea **36**: 224. 1869–70.

Lychnis magellanica Lam. Encycl. Méth. 3: 641. 1784.

53. M. ALPESTRE Dusén, Ark. f. Bot. 7[2]: 15. 1907.
54. STELLARIA DEBILIS Urv. Mém. Soc. Linn. Paris 4: 618. 1826.
55. ARENARIA SERPYLLOIDES C. Gay var. ANDICOLA (Gill.), Reiche, Fl. Chil. 1: 192. 1896.
    Arenaria andicola Gill.; Hook. Bot. Misc. 3: 148. 1833.

RANUNCULACEAE

56. ANEMONE MULTIFIDA Poir. var. GRANDIFLORA Rendle, Jour. Bot. 62: 328. 1904.
57. RANUNCULUS PEDUNCULARIS Sm. var. PATAGONICUS Poepp. Frag. Syn. Phaner. 20. 1833.
58. R. CYMBALARIA Pursh, Fl. Am. Sept. 392. 1814.

BERBERIDACEAE

59. BERBERIS EMPETRIFOLIA Lam. Tab. Encyc. Bot. Illustr. Gen. 2: 391. 1793.
60. B. ILICIFOLIA Linn. f. Suppl. Plant. 210. 1781.
61. B. MICROPHYLLA Forst. Comm. Soc. Gotting. 9: 29. 1789.

CRUCIFERAE

62. CARDAMINE HIRSUTA L. var. MAGELLANICA Phil. Anal. Univ. Chil. 666. 1872.
63. THLASPI MAGELLANICUM Pers. Syn. Plant. 2: 189. 1805.
64. CORONOPUS AUSTRALIS (Hook. f.) Macloskie, Rep. Princeton Univ. Exp. Pat. 8: 428. 1905.
    Senebiera australis Hook. f. Fl. Ant. 2: 241. 1847.

MAGNOLIACEAE

65. DRIMYS WINTERI Forst. Char. Gen. Plant. 84. *pl. 42.* 1776.

SAXIFRAGACEAE

66. ESCALLONIA RUBRA Pers. Syn. Plant. 2: 235. 1805.

This is called by the English colonists the "Elserly Bush." The presence of resin dots on the lower surface of the leaves distinguishes it from the next species.

67. E. BRITTENIANA Rendle, Jour. Bot. 42: 330. 1904.

68. RIBES CUCULLATUM Hook. & Arn.; Hooker, Bot. Misc. **3**: 340. 1833.
69. SAXIFRAGA CORDILLERARUM Presl, Rel. Haenk **2**: 55. 1835–36.
70. S. CORDILLERARUM Presl var. BREVISCAPA (Hook. f.) Macloskie, Rep. Princeton Univ. Exp. Pat. **8**: 459. 1905.
S. exarata Vill. var. *breviscapa* Hook. f. Fl. Ant. **2**: 280. 1847.

ROSACEAE

71. ACAENA MAGELLANICA Vahl var. VENULOSA (Griseb.) Bitter, Biblist. Bot. **74**: 168. 1911.
A. venulosa Griseb. Goett. Abh. **6**: 118. 1854.
72. A. PLATYACANTHA Speg. Rev. Agron. i Vet. La Plata 1897: 515.
73. A. PHILIPPI Dusén, Svenska Exp. till Magell. **3**: 167. 1900.
A. sericea Phil. Anal. Univ. Chil. **84**: 621. 1893. Not *A. sericea* Jacq.
74. A. MULTIFIDA Hook. f. Fl. Ant. 265. 1844.
75. GEUM MAGELLANICUM Comm.; Persoon, Syn. Plant. **2**: 57. 1807.
76. POTENTILLA ANSERINA L. Sp. Plant. 495. 1753.

LEGUMINOSAE

77. ADESMIA BORONOIDES Hook. f. Fl. Ant. 257. 1844.
78. A. SALICORNIOIDES Speg. Anal. Soc. Cien. **53**: 31. 1901.
79. **A. glandulifera** (Rendle) comb. nov.
Patagonium glanduliferum Rendle, Jour. Bot. **42**: 332. 1904.
80. **A. campestris** (Rendle) comb. nov.
Patagonium campestre Rendle, Jour. Bot. **42**: 332. *pl. 465*. 1904.
81. A. PARVIFOLIA Phil. Linnaea **28**: 683. 1856.
82. A. PUMILA Hook. f. Fl. Ant. 255. 1844.
83. A. VILLOSA Hook. f. Fl. Ant. 256. 1844.
84. ANARTHROPHYLLUM PRITCHARDI Rendle, Jour. Bot. **42**: 331. 1904.
85. **Astragalus Dusenii** nom. nov.
A. brevicaulis Dusén, Svenska Exped. till. Magell. **3**: 158. 1900. Not *A. brevicaulis* A. Nelson, Bull. Torrey Club **26**: 9. 1899.

86. A. PATAGONICUS (Phil.) Dusén, Svenska Exped. till Magell. **3**: 256. 1900.
Phaca patagonica Phil. Anal. Univ. Chil. **84**; 20. 1893.
87. LATHYRUS MAGELLANICUS Lam. Encycl. Méth. **2**: 708. 1806.
88. VICIA SERICELLA Speg. Anal. Soc. ci Argent. **47**: 278. 1899.
89. V. MAGELLANICA Hook. f. Fl. Ant. **2**: 257. 1847.
90. ERODIUM CICUTARIUM L'Hérit.; Aiton, Hort. Kew., ed. 1, **2**: 414. 1789.
91. GERANIUM SESSILIFLORUM Cav. Icon. Plant. **4**: 198. *pl. 77, f. 2.* 1797.

Standley (Contr. U. S. Nat. Herb. **18**: 111. 1916) has described a closely related species, *G. confertum*, collected by Pittier from the Central Cordillera of Colombia at altitudes of 3,000 to 3,600 meters.

92. G. MAGELLANICUM Hook. f. Fl. Ant. 251. 1844.

OXALIDACEAE

93. OXALIS PATAGONICA Speg. Rev. Agron. i Vet. La Plata 1897: 501.

EUPHORBIACEAE

94. EUPHORBIA PORTULACOIDES L. Sp. Plant. 456. 1753.

CELASTRACEAE

95. MAYTENUS MAGELLANICUS (Lam.) Hook. f. Fl. Ant. 254. *pl. 130.* 1844.
CASSINE MAGELLANICA Lam. Encycl. Méth. **10**: 130. 1811.

RHAMNACEAE

96. DISCARIA DISCOLOR (Hook. f.) Reiche, Fl. Chil. 16. 1898.
Colletia discolor Hook. f. Icon. Plant. *pl. 538.* 1838.

VIOLACEAE

97. VIOLA MACULATA Cav. Icon. Plant. **6**: 20. *pl. 539.* 1793.
"Throughout islands of Terra del Fuego. Vega regions." *C. W. F.*

LOASACEAE

98. LOASA VOLUBILIS Juss. Ann. Mus. Paris **5**: 26. *pl. 5, f. 1.* 1804.

99. L. ARGENTINA Urb. & Gilg, Nov. Act. Nat. Cur. **76**: 186. 1900.

ONAGRACEAE

100. EPILOBIUM PATAGONICUM Rendle, Jour. Bot. **42**: 367. 1904.

101. FUCHSIA MAGELLANICA Lam. Encycl. Méth. **2**: 564. 1783.

102. OENOTHERA ODORATA Jacq. Icon. Plant. Rar. **3**: 3. *pl. 456.* 1786–93.

103. PSEUDOPANAX LAETEVIRENS (C. Gay) Franchet, Miss. Sci. Cap. Horn 339. *pl. 1.* 1889.

Aralia laetevirens C. Gay, Fl. Chil. **3**: 151. 1847.

UMBELLIFERAE

104. AZORELLA TRIFURCATA (Gaertn.) Pers. Syn. **1**: 303. Hook. f. Icon. Plant. **6**: *pl. 539.* 1843.

Chamitis trifurcata Gaertn. De Fruct. **1**: 95. *pl. 22. f. 4.* 1788.

105. A. TRIFOLOLIATA Clos; C. Gay, Fl. Chil. **3**: 85. *pl. 30, f. 2.* 1847.

Leaflets less distinctly lobed than indicated in Gay's illustration.

106. CONIUM MACULATUM L. Sp. Plant. 243. 1753.

107. MULINUM SPINOSUM Pers. Syn. Plant. **1**: 309. 1805.

108. OREOMYRRHIS ANDICOLA Endl. Gen. Pl. 787. 1839.

109. OSMORHIZA BERTERII DC. Prodr. **4**: 232. 1830.

110. PERNETTYA MUCRONATA (Linn. f.) Gaud. Ann. Sci. Nat. Bot. I. **5**: 102. 1825.

Arbutus mucronata Linn. f. Suppl. Plant. 239. 1781.

PRIMULACEAE

111. SAMOLUS SPATHULATUS (Cav.) Duby; DeCandolle, Prodr. **8**: 74. 1844.

Androsace spathulata Cav. Icon. Plant. **5**: 56. *pl. 484. f. 1.* 1799.

PLUMBAGINACEAE

112. ARMERIA CHILENSIS Boiss. var. MAGELLANICA Boiss.; De Candolle, Prodr. **12**: 682. 1848.

GENTIANACEAE

113. GENTIANA PATAGONICA Griseb. Gen. Spec. Gent. 237. 1839.

POLEMONIACEAE

114. COLLOMIA COCCINEA Lehm.; Bentham, Bot. Reg. *pl. 1622.* 1833.

Phlox linearis Cav. Icon. Plant. **6**: 17. *pl. 527.* 1801.

115. C. GRACILIS Dougl.; Hooker, Bot. Mag. *pl. 2924.* 1829 (as synonym); Bentham, Bot. Reg. *pl. 1622.* 1833.

Gilia gracilis Hook. Bot. Mag. *pl. 2924.* 1829.

HYDROPHYLLACEAE

116. PHACELIA CIRCINATA Jacq. f. Eclog. Am. Plant. **1**: 135. *pl. 1.* 1811–16.

SCROPHULARIACEAE

117. CALCEOLARIA BIFLORA Lam. Encycl. Méth. **1**: 556. 1783.

C. plantaginea Smith, Plant. Icon. **1**: 2. *pl. 2.* 1789.

118. C. TENELLA Poepp. & Endl. Nov. Gen. Sp. Plant. **3**: 76. *pl. 287.* 1845.

A delicate species. Leaves nearly orbicular, about 5 mm. in diameter, the flower about 1 cm. in length and breadth.

119. C. UNIFLORA Lam. Tab. Encycl. Méth. **1**: 52. 1791.

120. **C. Pritchardi** (Rendle) comb. nov.

Fagelia Prichardi Rendle, Jour. Bot. **42**: 371. 1904.

121. EUPHRASIA ANTARCTICA Benth.; DeCandolle, Prodr. **10**: 555. 1846.

122. OURISIA RUELLOIDES (Linn. f.) Gaertn. f. De Fruct. **3**: *pl. 185.* 1805–07.

Chelone ruelloides Linn. f. Suppl. Plant. 271. 1781.

Ourisia magellanica Gaertn. f. De Fruct. **3**: 44. *pl. 185.* 1805–07.

BORAGINACEAE

123. AMSINCKIA ANGUSTIFOLIA Lehm. Del. Sem. Hort. Hamb. 7. 1831.

124. ERITRICHIUM DIFFUSUM Phil. Plant. Chil. 191. 1894.

VERBENACEAE

125. VERBENA PRITCHARDI Rendle, Jour. Bot. **43**: 33. 1905.
126. V. CARROO Speg. Anal. Soc. Cient. Argent. **15**: 112. 1883.
127. SATUREIA DARWINII (Benth.) Briquet; Engler & Prantl, Nat. Pflanzenfam. 4^{3a}: 300. 1897.
Micromeria Darwinii Benth.; DeCandolle, Prodr. **12**: 222. 1848.

PLANTAGINACEAE

128. PLANTAGO MARITIMA L. Sp. Plant. 114. 1753.

RUBIACEAE

129. CRUCKSHANKSIA GLACIALIS Poepp. & Endl. Nov. Gen. Sp. Plant. **3**: 31. *pl. 236*. 1845.
Oreopolus citrinus Schlecht. Linnaea **28**: 493. 1856.
130. RELBUNIUM PUSILLIUM (Gill.) K. Schum.; Martius, Fl. Bras. 6^{6}: 117. 1888.
Rubia pusilla Gill.; Hooker & Arnott, Bot. Misc. **3**: 363. 1833.
131. GALIUM APARINE L. Sp. Plant. 108. 1753.

VALERIANACEAE

132. VALERIANA CARNOSA Smith, Pl. Icon. Ined. **3**: *pl. 52*. 1791.
133. V. LAPATHIFOLIA Vahl, Enum. Plant. **2**: 11. 1806.

CALYCERACEAE

134. MOSCHOPSIS SPATHULATA Dusén, Ark. f. Bot. 7^{2}: 41. *pl. 5, f. 7; pl. 8, f. 13, 15*. 1908.

The specimens were collected near Cerro Sepulchro on a divide in the Baguales Mountains, at an altitude of 1,800 meters. They do not agree in all respects with the incomplete descriptions and figures given by Dusén but are more like that species than any other we have found described.

COMPOSITAE

135. BACCHARIS DARWINII Hook. & Arn. Jour. Bot. **3**: 34. 1841.
136. B. PATAGONICA Hook. & Arn. *l. c.* **3**: 29. 1841.
137. B. MAGELLANICA (Lam.) Pers. Syn. Plant. **2**: 425. 1807.
Conyza magellanica Lam. Encycl. Méth. **2**: 91. 1806.

138. CHILIOTRICHIUM DIFFUSUM (Forst.) Dusén Svenska Exped. till Magell. **3**: 99. 1900.
Amellus diffusus Forst. Comm. Soc. Gotting. **9**: 39. 1789.

139. CULCITIUM MAGELLANICUM (Hook. & Arn.) Hombr. & Jacquem.; Decaisne, Bot. Voy. Astrol. et Zél. 45. 1853.
Senecio magellanicus Hook. & Arn. Jour. Bot. **3**: 343. 1841.

140. ERIGERON ALPINUS L. Sp. Plant. 864. 1753.

There is a great variation in size in the specimens. The largest are 25 cm. high. The smallest are nearly acaulescent and about 4 cm. high.

141. E. SPICULOSUS Hook. & Arn. Bot. Beech. Voy. **1**: 32. 1841.

142. HIERACIUM TRISTE Willd.; Sprengel in Linnaeus, Syst. Veg. ed. 16, **3**: 640. 1826.

143. H. AUSTRO-AMERICANUM Dahlst.; Dusén, Ark. f. Bot. 7^2: 51. 1907.

144. HYPOCHOERIS ARENARIA Gaud. Ann. Sci. Nat. Bot. I. **5**: 103. 1825.

145. ANTENNARIA MAGELLANICA Sch. Bip. Flora **38**: 117. 1855.

146. A. CHILENSIS Remy; C. Gay, Fl. Chil. **4**: 235. 1849.

147. GNAPHALIUM PURPUREUM L. Sp. Plant. 854. 1753.

148. G. SPICATUM Lam. Encycl. Méth. **2**: 757. 1806.

149. LAGENOPHORA HIRSUTA Poepp.; Lessing, Linnaea **6**: 131. 1831.

150. LEUCERIA LANIGERA O. Hoffm.; Dusén, Svenska Exped. till Magell. **3**: 115. 1900.

151. L. PATAGONICA Speg. Rev. Agron. i Vet. La Plata 1897: 538.

152. L. MULTIFIDA (DC.) S. Moore; Rendle, Jour. Bot. **42**: 376. 1904.
Chabraea multifida DC. Prodr. **7**: 60. 1838.

153. L. PURPUREA (Vahl) O. Hoffm.; Dusén, Svenska Exp. till Magell. **3**: 118. 1900.
Chabraea purpurea DC. Ann. Mus. Paris **19**: 65, 71. *pl. 19*. 1812.

154. L. RUNCIANATA Gill. & D. Don, Phil. Mag. 1832: 389.
Chabraea rosea DC.; Delessert, Icon. Sel. Plant. **4**. *pl. 90*. 1820.

155. MADIA SATIVA Molina, Sagg. Chile 136. 1782.
The specimens vary from 40 cm. to only 4 cm. high.
156. NARDOPHYLLUM HUMILE (Hook. f.) A. Gray, Proc. Amer. Acad. **5**: 123. 1862.
Chiliotrichium humile Hook. f. Fl. Ant. 304. 1844.
157. NASSAUVIA DARWINII (Hook. & Arn.) O. Hoffm.; Dusén, Svenska Exped. till Magell. **3**: 112. 1900.
Panargyrus Darwinii Hook. & Arn. Comp. Bot. Mag. **2**: 43. 1836.
158. N. PYGMAEA Hook. f. F. Ant. **2**: 319. 1847.
159. N. REVOLUTA D. Don, Phil. Mag. **11**: 390. 1832.
160. N. SUBSPINOSA (Phil.) Wildeman, Rés. Voy. Belgica, Bot. Phan. 177. 1905.
Panargyrum subspinosum Phil. Anal. Univ. Chil. **85**: 98. 1894.
161. PEREZIA RECURVATA (Vahl) Lag. Amen. Nat. Esp. 31. 1811.
162. P. LINEARIS Less. Syn. Gen. Comp. 412. 1832.
163. SENECIO ACANTHIFOLIUS Hombr. & Jacquem.; Decaisne, Voy. Astrol. et Zél. 46. *pl. 115*. 1853.
164. S. HATCHERIANUS Hoffm.; Macloskie, Rep. Princeton Univ. Exp. Pat. **8**: 847. 1905.
165. S. PATAGONICUS Hook. & Arn. Jour. Bot. **3**: 344. 1841.
166. S. DARWINII Hook. & Arn. *l. c.* **3**: 333. 1841.
167. S. FALKLANDICUS Hook. f. Fl. Ant. 316. *pl. 110*. 1844.
168. S. KINGII Hook. f. *l. c.* 314. 1844.
169. S. LONGIPES Hook. f. *l. c.* 314. 1844.
170. S. PAENINSULARIS S. Moore; Rendle, Jour. Bot. **42**: 374. 1904.
171. S. SERICEO-NITENS Speg. Rev. Agron. i Vet. La Plata 1897: 537.
172. S. TRIFURCATUS Less. Syn. Comp. 392. 1832.
173. TARAXACUM LAEVIGATUM DC. Cat. Hort. Monsp. 149. 1813.
174. ACHYROPHORUS TENUIFOLIUS DC. Prodr. **7**: 94. 1838.
175. ASTER VAHLII Hook. & Arn. Comp. Bot. Mag. **2**: 49. 1836.
176. MATRICARIA CHAMOMILLA L. Sp. Plant. 891. 1753.
177. ADENOCAULON CHILENSE Less. Linnaea **6**: 107. 1831.

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